

Abstract

A method of producing carbon single wall nanotubes (SWNT) by CVD is disclosed. The SWNTs are grown on a metal-catalyzed support surface, such as a commercially available silicon tips for atomic force microscopes (AFM). The growth characteristics of the SWNTs can be controlled by adjusting the density of the catalyst and the CVD growth conditions. The length of the SWNTs can be adjusted through pulsed electrical etching. Nanotubes of this type can find applications in nanotubes structures with defined patterns and for nano-tweezers. Nano-tweezers may be useful for manipulating matter, such as biological material, on a molecular level.